APPENDIX B
STREET PLANTINGS

B-1. Introduction. The use of street plantings, particularly trees, is one of the most effective means to enhance and define the road hierarchy. Trees will also provide shade and improve the overall visual quality of the installation. A systematic design approach should be employed to establish a coordinated street planting program for the entire installation.

B-2. Relationship to master planning. If the visual quality of military installations is to be improved, design procedures and guidelines must be incorporated into the master planning process. It is at the master planning level that there is an appropriate overview directed at insuring overall compatibility of individual program needs. Formulation of an installation street planting program to support the overall objectives of the installation master plan will provide guidelines for improving the visual quality of a military installation.

B-3. Assessment of the existing environment. The steps listed below should be followed in assessing the existing situation. TM 5-803-5/NAVFAC P-960/AFM 88-43 explains each of these procedures in detail.

— Overview visual survey.
— Supplementary visual surveys.
— Documentation of findings.

B-4. Formulation of design guidelines.

a. Goals and objectives. In order to develop an installation street planting program, it is necessary to establish specific goals and objectives. The specific mission, priorities, existing visual assets and liabilities, and planned changes for each installation should influence the formulation of these goals and objectives.

b. Overall design criteria and guidelines. After design objectives for the installation have been established, design criteria responsive to these objectives should be formulated. Based on these criteria, overall design guidelines for the installation should be established. Some general criteria and guidelines for street plantings are as follows:

(1) Street trees should be placed between the sidewalk and the building, leaving the strip between the sidewalk and the curb free for underground utilities and traffic and street lights. If there are no sidewalks, the distance between the curb and the trees should be at least four feet to prevent damage to trees from vehicles.

(2) In the design of a street planting, separate plant species may be used to identify distinctive details or areas of the installation, for example, a particular land-use relationship, historic district, community area or other similar entity.

(3) The selection of tree species, spacing and location along roads should bear a relationship to the class of roadway. Roadways are generally classified as arterial, secondary or collector, or local. Plantings should reflect the nature and speed of passing traffic. The visual and psychological impact of tree plantings is of very real value in establishing a hierarchy of traffic flow from installation entrances to major and minor roads. A clearly structured and consistent planting scheme can provide overall visual coherence on the installation.

(4) A palette of readily-available, hardy trees with suitable growth characteristics should be developed for use as street trees. These should include large, medium-sized and smaller trees and may include flowering species. A variety of disease and insect resistant species should be used to insure that an infestation of insects or disease does not decimate the street tree plantings on the entire installation.

(5) Initial size of large growing trees should generally be about 2½ inch caliper. This size tree is usually available in sufficient quantity, recovers well from transplanting and grows rapidly once established. Smaller-growing trees can be proportionately smaller initially. However, small flowering trees should be at least 8 to 10 feet high with trunks of 1 to 1½ inch caliper.

(6) The selection, location and spacing of street trees must accommodate the safety requirement of vehicles and pedestrians. Adequate sight distances must be maintained at intersections, driveways, cross-walks or other locations where clear vision is important. Criteria for safety must include an analysis of road size and alignment and speed and volume of traffic.

B-5. Alternatives to linear tree plantings. Linear arrangements are traditional for street tree plantings because they are simple, economical and dramatic. However, in some areas, a less formal planting may be more successful. In more developed parts of the installation, planting spaces may be limited or irregular in shape because of underground utilities. In this case, irregular, nonlinear plantings may provide flexibility to fully utilize those spaces that provide the best growing conditions. Trees should only be planted where there is adequate soil and space (fig B-I). Nonlinear planting designs may incorporate cluster plantings when sufficient space is available. These clusters may include tall, canopied species, smaller under-story plants and ground covers (fig

B-2) Nonlinear plantings may also provide a better match of plant species to varying microclimate, soil or traffic conditions. Opposite sides of a street may have dramatically different microclimates or varying parking or pedestrian patterns (fig B-3).

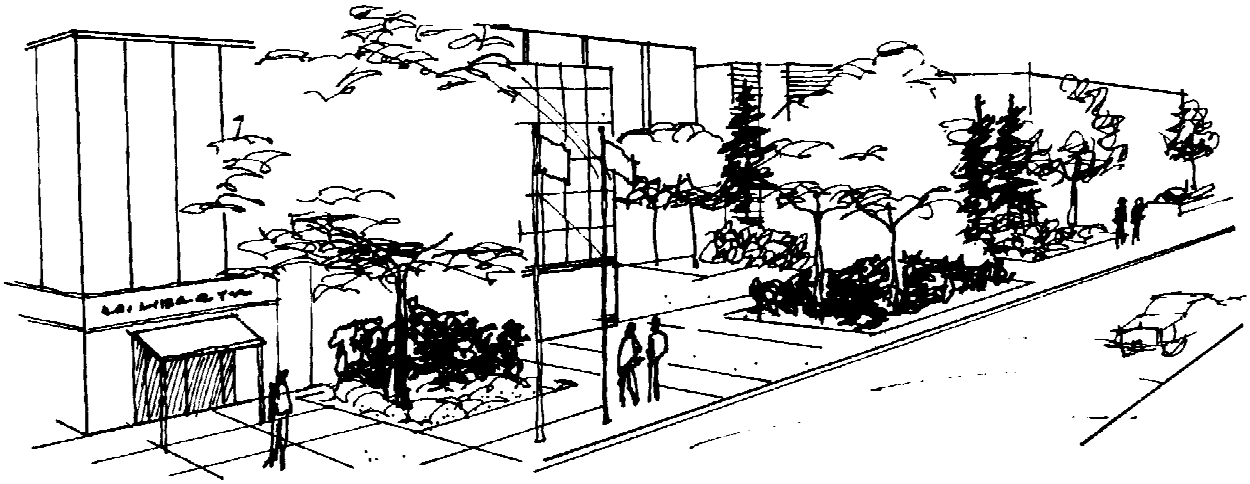

Figure B-1. Nonlinear street plantings.

Figure B-2. Cluster plantings.

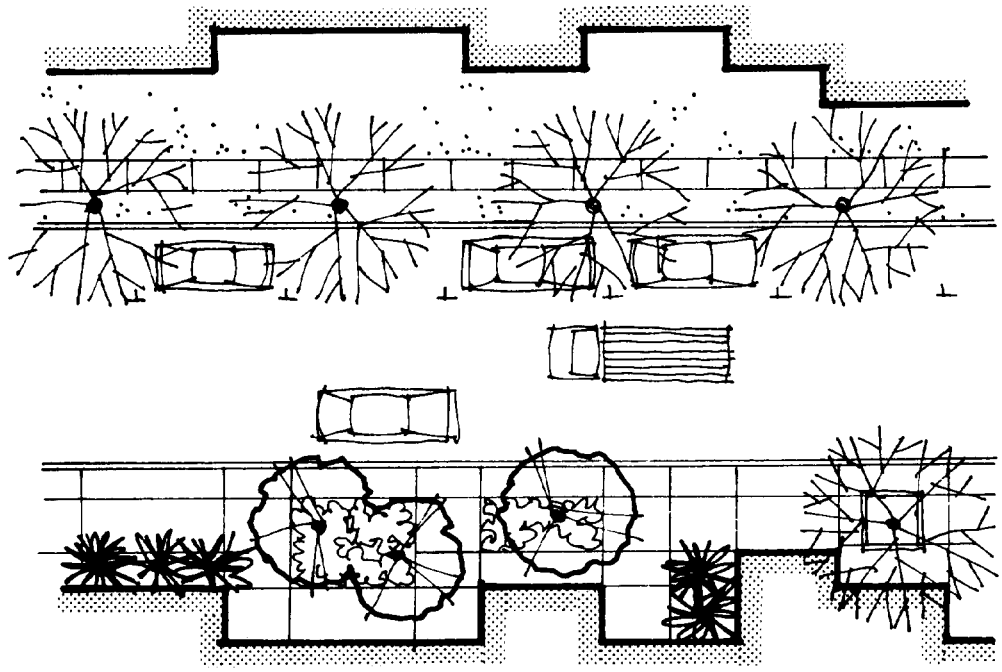

Figure B-3. Varying conditions.

B-6. Site preparation for street plantings. With proper planning, trees can thrive in developed areas in spite of air pollution, temperature extremes and high winds. To survive under these conditions, tree roots must have a suitable environment. It is often difficult to supply adequate oxygen, water and nutrients in individual planting pits in paved areas. Cluster planting can provide an area large enough for groups of plants to protect each other by creating a mutually beneficial microclimate, where plants partially shade and cool each other and the soil.

a. In most cases, soil from the site should not be replaced because tree roots must eventually grow into the surrounding soil. Many times imported soil creates more problems than it solves. If soil is replaced, existing and imported soils should be thoroughly mixed over as large an area as is practical.

b. When it is not practical to plant at grade, the use of raised planting beds should be considered. This practice improves drainage and can be used to direct pedestrian movement without danger of compacting the soil. Raised planters should be at least 8-inches high and bounded by a curb of wood, masonry or cement.